

Claims:

1. A method for penetrating film-type substrates (8) being arranged air-proofed or tightly one above the other, wherein only a desired number of foil layers is pierced by the defined rotation of a cylindrical hollow body (3) through control of the number of rotations and extent of the torque of at least one cutting surface (14) of the helically terminating portion (12) of the cylindrical hollow body.

2. A method according to claim 1, characterized in that a gaseous or liquid medium is introduced between the foil layers (17) and (18) through the specially inserted cylindrical hollow body (3).

3. Device for penetrating film-type substrates (8) being arranged air-proofed or tightly one above the other, comprising a unilaterally helically designed, cylindrical hollow body (3), wherein at least one cutting surface (14) of the helically terminating portion (12) of the cylindrical hollow body is designed to gradually pierce a foil (8) or (18), respectively, by rotation on the same, so as to prevent any penetration into the consecutive foil layer (17) at a defined stop of the rotary movement.

4. Device according to claim 3, characterized in that an adaptation of the penetration behaviour to different materials and material thicknesses is feasible by the angle of inclination of the cutting surface (14).

5. Device according to claim 3 or 4, characterized in that the distance of the individual foil layers (17) and (18) relative to each other is determined during separation by the lead of the thread (12) constituting the helical configuration.

6. Device according to any one of claims 3 to 5, characterized in that the degree of adherence of the individual foil layers (18) to the cylindrical hollow body is determinable by determining the dimension of the thread (12) constituting the helical configuration.

7. Device according to any one of claims 3 to 6, characterized in that it is fixedly surrounded by a funnel-shaped part (4) through which the surrounding atmosphere can be sucked (5) in a manner that the foil layers (8) applied on the helically designed, cylindrical hollow body are sucked in by vacuum and thereby placed into a defined and immovable position relative to the cutting surfaces (14) forming the end of the helically designed, cylindrical hollow body (3).

8. Device according to any one of claims 3 to 7, characterized in that it is connected with a cushioning part located opposite the cutting surfaces (14) forming the end of the helically designed, cylindrical hollow body, in a manner that said cushioning part places the foil layers in a defined and immovable position relative to the cutting surfaces (14) forming the end of the helically designed, cylindrical hollow body (3).

9. Device according to any one of claims 3 to 8, characterized in that it comprises an internally arranged, second, unilaterally closed hollow cylinder, wherein said second hollow cylinder determines the exit opening for the gaseous or liquid medium between the separated foil layers by changes in position.

10. Device according to any one of claims 3 to 9, characterized in that at least one opening (13) opens near the cutting surface (14) or along the thread (12) being in communication with the interior of the cylindrical hollow body (3).